

# Why Micro Gravity Research?

**Needed a plant cell transformation system that had:**

**increased frequency,  
reduced time and was  
genotype and species independent**

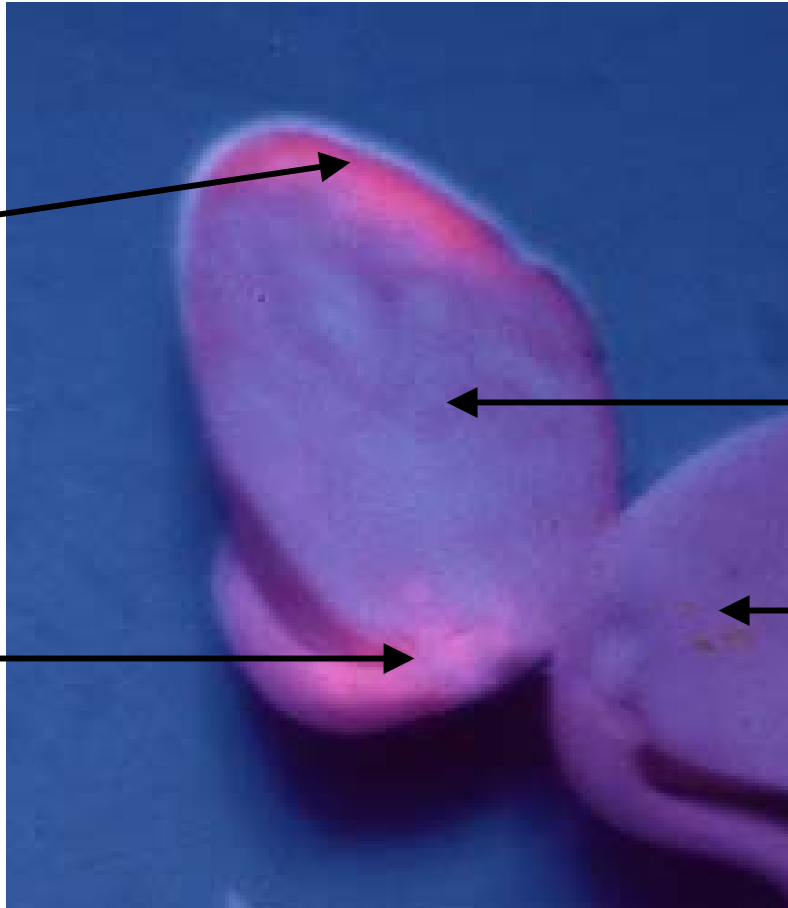
**FOR FASTER AND MORE EFFICIENT  
VACCINE PRODUCTION**

**Unexpected**

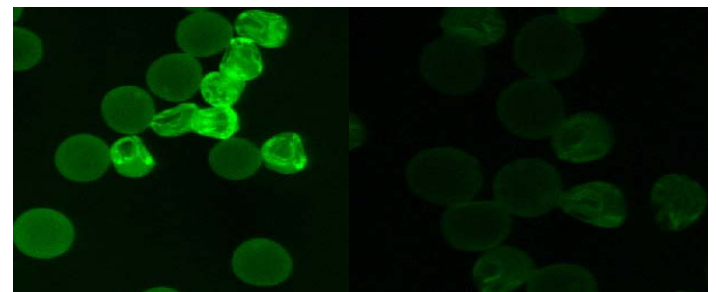
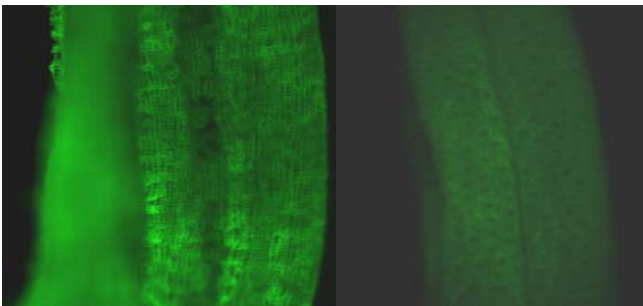
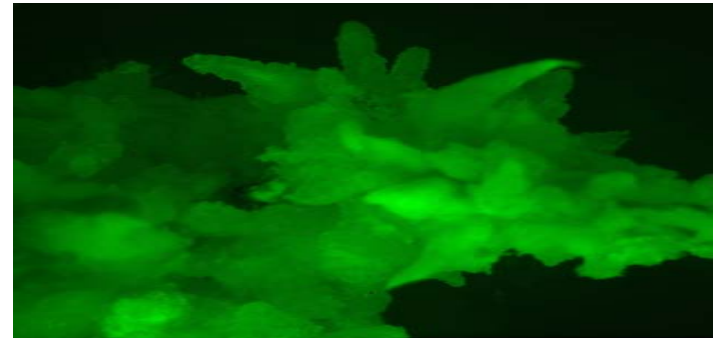
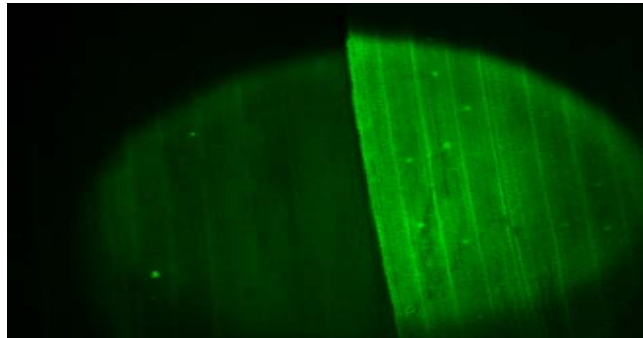
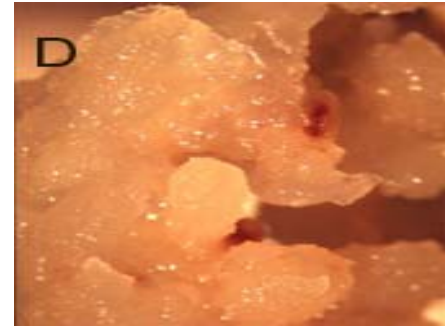
**Target**

**Micro  
Gravity**

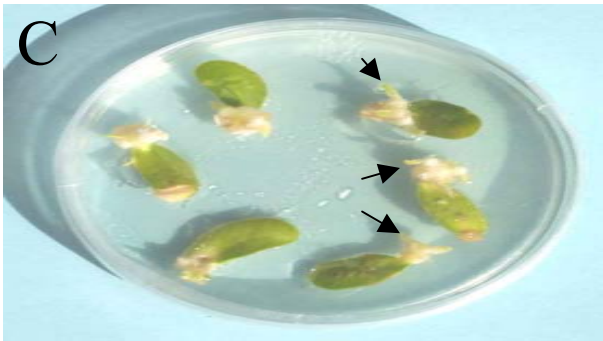
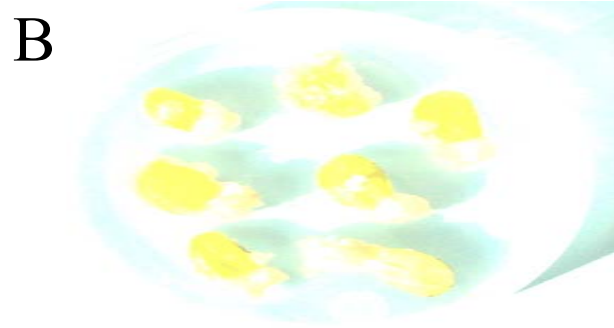
**1 G**



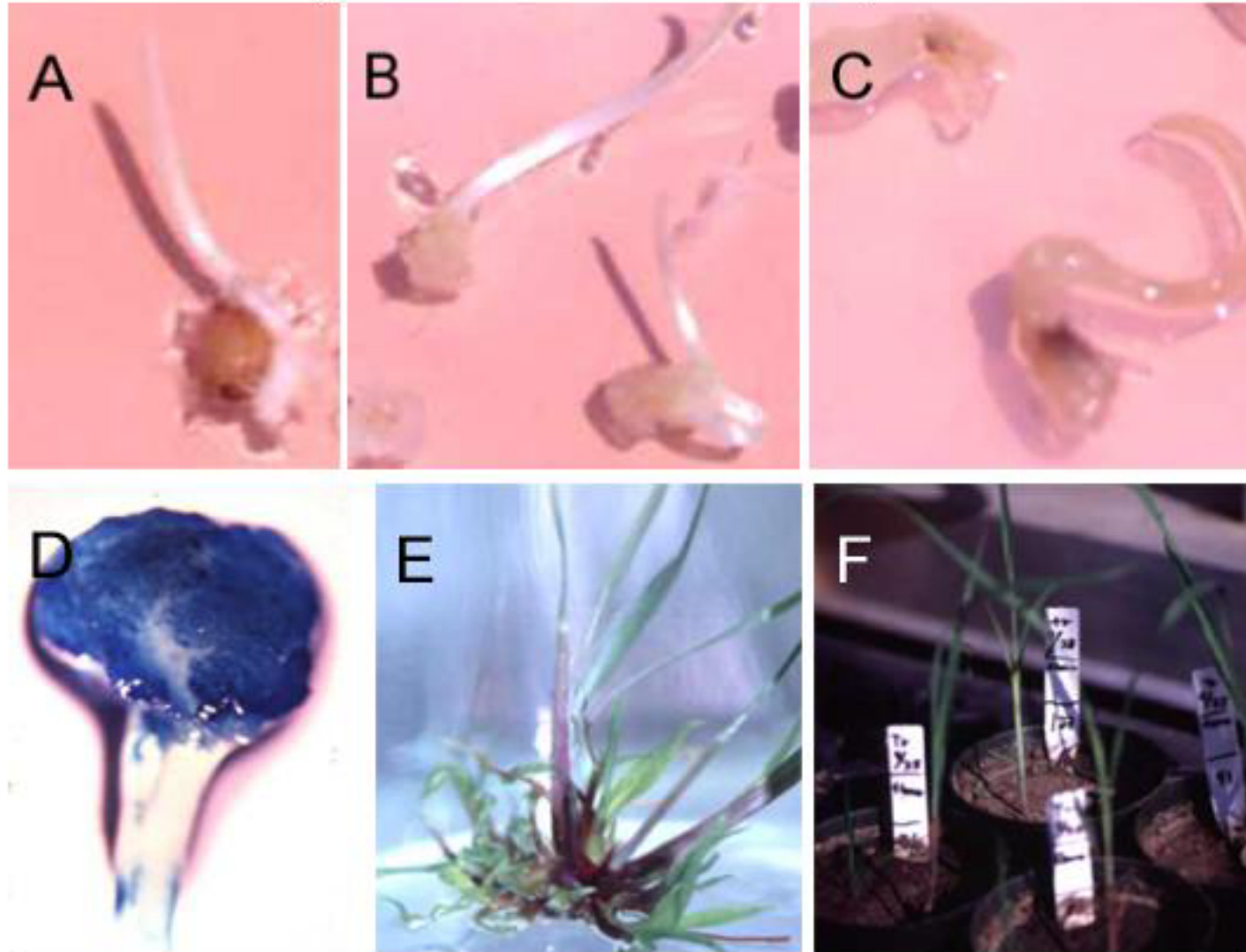
## An ideal explant for corn transformation



# Soybean Transformation



# Regeneration of Plants from *Tripsacum*



- A. Germinated *Tripsacum*
- B. Callus Induction from Isolated Meristems
- C. 3 Week Callus Meristems
- D. Transformed *Tripsacum* Meristem Expressing Gus
- E. *In vitro* Plantlets
- F. Transformed *Tripsacum* Plants in Greenhouse

# **EXPOSURE TO OTHER TECHNOLOGIES**

**Photodynamic Induction:**

**increased DNA vaccine production  
by 250%**